Amendments to the Claims:

1.-34. (Cancelled)

35. (Currently Amended) A method of ~~treating~~ implanting human intervertebral disc ~~diseases~~ cells into a patient with damaged or diseased intervertebral disc tissue comprising the steps of:

a) providing [[a]] minced human intervertebral disc cells;

b) culturing said minced human intervertebral cells under conditions to propagate and form a monolayer of human intervertebral disc cells;

c) isolating ~~the~~ said cultured human intervertebral disc cells from said monolayer;

d) seeding said isolated cells in a carrier such that the isolated cells are dispersed and distributed in the carrier;

e) further culturing said dispersed and distributed cells in said carrier; and

f) implanting said carrier into a target disc area needing treatment in a human patient.

36. (Cancelled)

37. (Previously Presented) The method according to of Claim 35 wherein said carrier is a member of the group consisting of alginate, agarose, collagen, and mixtures thereof.

38. (Previously Presented) The method according to of Claim 35 wherein at least a portion of said propagated human intervertebral disc cells have re-expressed extracellular matrix materials.

39. (Currently Amended) A method of ~~treating a diseased or injured~~ implanting human intervertebral disc cells into a patient with damaged or diseased intervertebral disc tissue comprising the steps of:

obtaining live human intervertebral ~~human~~ disc cells;

culturing said live human intervertebral disc cells under conditions to propagate cultured intervertebral disc cells; and

implanting said cultured live human intervertebral disc cells into a target disc area needing treatment in a human patient.

5 ~~40.~~ (Currently Amended) The method according to Claim 4 ~~39~~, wherein said live human intervertebral disc cells are obtained from said human patient to be treated.

6 ~~41.~~ (Currently Amended) The method according to Claim 4 ~~39~~, further comprising the step of mincing said live human intervertebral disc cells to obtain an explant prior to culturing.

13 ~~42.~~ (Previously Presented) The method according to Claim 4 ~~39~~, wherein said cultured human intervertebral disc cells are combined with a carrier material.

14 ~~43.~~ (Previously Presented) The method according to Claim 13 ~~42~~, wherein said carrier material is selected from the group consisting of alginate, agarose, collagen, and mixtures thereof.

7 ~~44.~~ (Previously Presented) The method according to Claim 6 ~~41~~, wherein said explant is cultured in the presence of a material selected from the group consisting of fetal calf serum and fetal bovine serum.

8 ~~45.~~ (Previously Presented) The method according to Claim 6 ~~41~~, wherein said explant is cultured in the presence of a material selected from the group consisting of growth factor beta (TGF-β), insulin-like growth factor I, insulin-like growth factor II, basic fibroblast growth factor, acidic fibroblast growth factor, platelet-derived growth factor, insulin, human recombinant bone morphogenetic protein 2, and vitamin D.

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~~46.~~ (Currently Amended) The method according to Claim ~~39~~, wherein said implanting step comprises:

debriding diseased or injured disc ~~cells~~ tissue in said patient; and

then delivering said cultured human intervertebral disc cells into the area of debridement.

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~~47.~~ (Currently Amended) The method of Claim ~~41~~, further including the steps of:

(a) culturing said explant under conditions to propagate a monolayer of human intervertebral disc cells ~~, wherein said disc cells can be isolated and further propagated upon passaging~~;

(b) isolating said human intervertebral disc cells from said monolayer to form isolated disc cells;

(c) distributing said isolated human intervertebral disc cells in a carrier material such that said isolated disc cells form a three-dimensional structure; and

(d) ~~culturing~~ propagating said isolated human intervertebral cells in said three-dimensional structure.

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~~48.~~ (Currently Amended) The method according to Claim ~~47~~, wherein said live human intervertebral disc cells are obtained from said human patient to ~~be treated~~ whom the cultured cells are to be implanted.

49. (Previously Presented) The method according to Claim 47, wherein said ~~monolayer~~ cultured explant of human intervertebral disc cells is combined with a carrier material.

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50. (Previously Presented) The method according to Claim 49, wherein said carrier material is selected from the group consisting of alginate, agarose, collagen, and mixtures thereof.

12 ~~51~~. (Previously Presented) The method according to Claim ~~47~~ 9, wherein said explant is cultured in the presence of a material selected from the group consisting of fetal calf serum and fetal bovine serum.

52-58. (Cancelled)